

What is claimed is:

1. A screen comprising:

 a mesh-like substrate; and

 a titanium dioxide coating with photocatalytic activity provided on the mesh-like
5 substrate.

2. The screen as claimed in claim 1, wherein the titanium dioxide coating includes titanium
dioxide particles with an anatase crystal structure or a mixed crystal structure of anatase and
rutile.

3. The screen as claimed in claim 2, wherein the titanium dioxide particles contain a mixed
10 crystal structure of anatase and rutile and the ratio of anatase to rutile is 80:20.

4. The screen as claimed in claim 2, wherein the titanium dioxide particles are nanosize.

5. The screen as claimed in claim 1, wherein the mesh-like substrate is formed from a polymer
material selected from the group consisting of nylon, poly vinyl chloride (PVC), polyethylene
terephthalate (PET), polypropylene (PP) and poly butylene terephthalate (PBT).

15 6. The screen as claimed in claim 1, wherein the titanium dioxide coating comprises a buffer
interface molecule having one end bonded to the titanium dioxide and the other end bonded to
another ingredient of the titanium dioxide coating or the mesh-like substrate.

7. The screen as claimed in claim 6, wherein the buffer interface molecule contains at least one
silicon atom for bonding with the titanium dioxide.

20 8. A screen comprising a mesh-like substrate including a plurality of titanium dioxide particles
with photocatalytic activity.

9. The screen as claimed in claim 8, wherein the titanium dioxide particles contain an anatase
crystal structure or a mixed crystal structure of anatase and rutile.

25 10. The screen as claimed in claim 9, wherein the titanium dioxide particles contain a mixed
crystal structure of anatase and rutile and the ratio of anatase to rutile is 80:20.

11. The screen as claimed in claim 8, wherein the titanium dioxide particles are nanosize.

12. The screen as claimed in claim 8, wherein the mesh-like substrate is formed from a
polymer material selected from the group consisting of nylon, poly vinyl chloride (PVC),
polyethylene terephthalate (PET), polypropylene (PP) and poly butylene terephthalate (PBT).

13. The screen as claimed in claim 8, further comprising a buffer interface molecule having one end bonded to the titanium dioxide and the other end bonded to the mesh-like substrate.

14. The screen as claimed in claim 13, wherein the buffer interface molecule contains at least one silicon atom for bonding with the titanium dioxide.

5 15. A screen comprising:

a polyester mesh-like substrate; and

a plurality of polyurethane nanoparticles provided on the surface of the polyester mesh-like substrate.

10 16. The screen as claimed in claim 15, wherein the mesh-like substrate is made of polyethylene terephthalate.

17. A screen comprising:

a poly vinyl chloride (PVC) mesh-like substrate; and

a plurality of nanoparticles made of nylon 6-clay composite provided on the surface of the PVC mesh-like substrate.

15 18. The screen as claimed in claim 17, wherein the mesh-like substrate is formed from poly vinyl chloride (PVC).